SWIMMING POOL HEAT PUMP UNIT

Installation & Instruction Manual
Hydro-Pro+ Premium

HYDRO-PRO+ premium

Item codes:
7000855– 7000856– 7000857– 7000858– 7002050– 7002051

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1. PREFACE

- In order to provide our customers with quality, reliability and versatility, this product has been made to strict production standards. This manual includes all the necessary information about installation, debugging, discharging and maintenance. Please read this manual carefully before you open or maintain the unit. The manufacture of this product will not be held responsible if someone is injured or the unit is damaged, as a result of improper installation, debugging, or unnecessary maintenance. It is vital that the instructions within this manual are adhered to at all times. The unit must be installed by qualified personnel.

- The unit can only be repaired by qualified installer centre , personnel or an authorised dealer.

- Maintenance and operation must be carried out according to the recommended time and frequency, as stated in this manual.

- Use genuine standard spare parts only.
  Failure to comply with these recommendations will invalidate the warranty.

- Swimming Pool Heat Pump Unit heats the swimming pool water and keeps the temperature constant. For split type unit, The indoor unit can be Discretely hidden or semi-hidden to suit a luxury house.

  Our heat pump has following characteristics:

  1 Durable
  The heat exchanger is made of PVC & Copper Nickle tube which can withstand prolonged exposure to swimming pool water.
  2 Installation flexibility
  The unit can be installed outdoors or indoors.
  3 Quiet operation
  The unit comprises an efficient rotary/ scroll compressor and a low-noise fan motor, which guarantees its quiet operation.
  4 Advanced controlling
  The unit includes micro-computer controlling, allowing all operation parameters to be set. Operation status can be displayed on the LED wire controller. Remote controller can be chosen as future option.

2.SPECIFICATION

2.1 Performance data of Swimming Pool Heat Pump Unit

*** REFRIGERANT : R410A

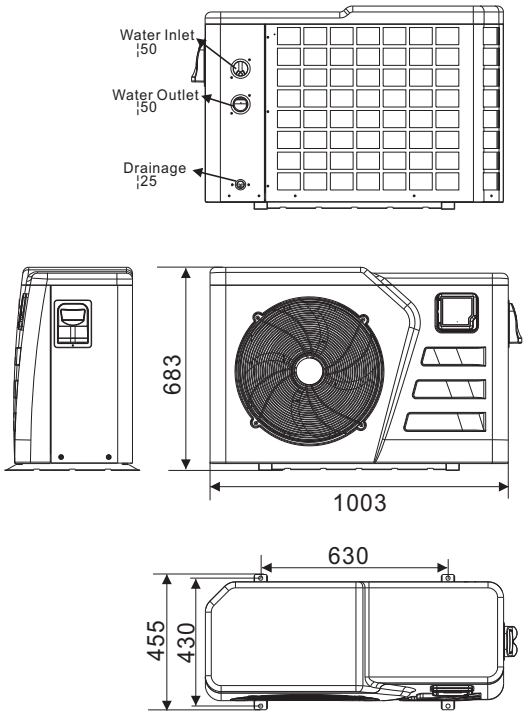
UNIT	Model	Hydro-Pro+ premium 7	Hydro-Pro+ premium 10
Heating Capacity	kW	6.0	8.0
	Btu/h	20400	27200
Heating Power Input	kW	1.41	1.87
Running Current	A	6.4	8.5
Power Supply		230V~/50Hz	230V~/50Hz
Compressor Quantity		1	1
Compressor		rotary	rotary
Fan Quantity		1	1
Fan Power Input	W	120	120
Fan Rotate Speed	RPM	850	850
Fan Direction		horizontal	horizontal
Noise	dB(A)	51	54
Water Connection	mm	50	50
Water Flow Volume	m^3/h	2.5	3.4
Water Pressure Drop (max)	kPa	10	10
Unit Net Dimensions (L/W/H)	mm	See the drawing of the units	
Unite Shipping Dimensions (L/W/H)	mm	See package label	
Net Weight/Shipping Weight	kg	See nameplate/See package label	

UNIT	Model	Hydro-Pro+ premium 14	Hydro-Pro+ premium 19
Heating Capacity	kW	11.5	15.5
	Btu/h	39100	52700
Heating Power Input	kW	2.48	3.48
Running Current	A	11.3	15.8
Power Supply		230V~/50Hz	230V~/50Hz
Compressor Quantity		1	1
Compressor		rotary	scroll
Fan Quantity		1	1
Fan Power Input	W	120	120
Fan Rotate Speed	RPM	850	850
Fan Direction		horizontal	horizontal
Noise	dB(A)	56	56
Water Connection	mm	50	50
Water Flow Volume	m^3/h	5.0	6.5
Water Pressure Drop (max)	kPa	10	10
Unit Net Dimensions (L/W/H)	mm	See the drawing of the units	
Unite Shipping Dimensions (L/W/H)	mm	See package label	
Net Weight/Shipping Weight	kg	See nameplate/See package label	

2.2 The dimensions for Swimming Pool Heat Pump Unit

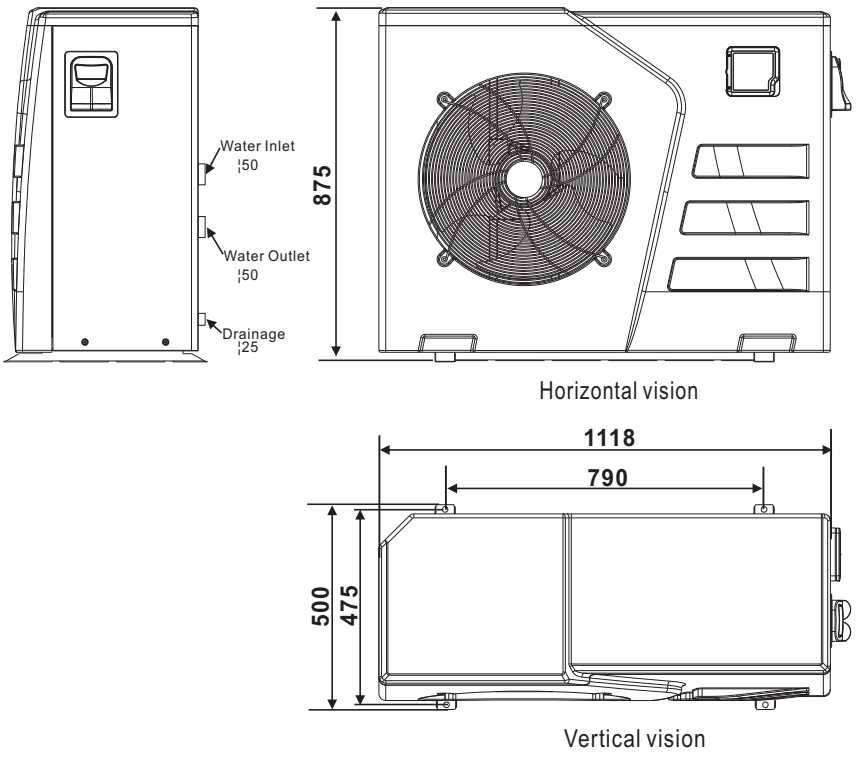
Hydro-Pro+ premium 7/Hydro-Pro+ premium 10

unit mm



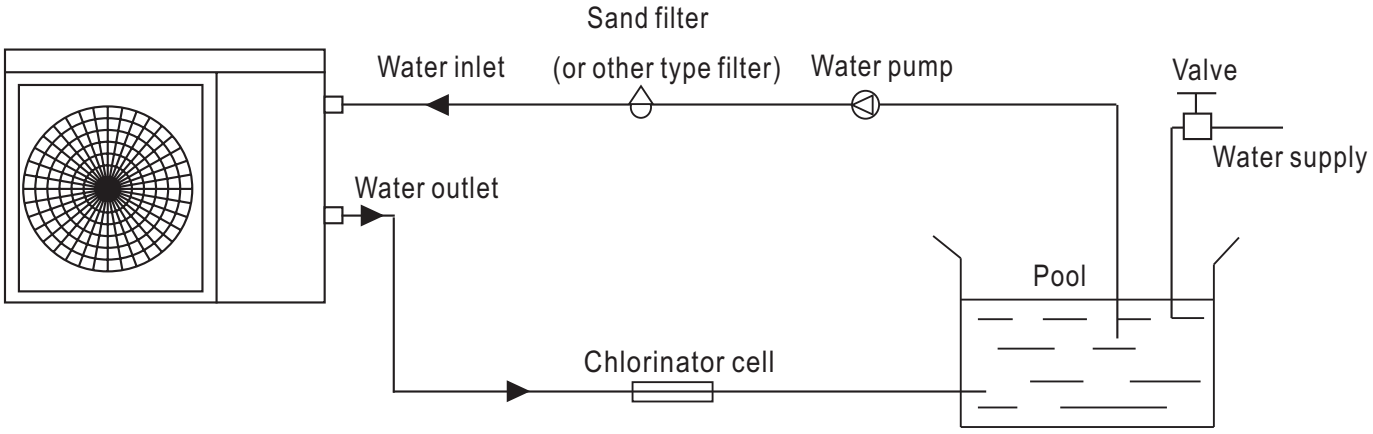
Hydro-Pro+ premium 14 / Hydro-Pro+ premium 19

unit mm



3.INSTALLATION AND CONNECTION

3.1 Installation illustration



Installation items:

The factory only provides the main unit and the water unit; the other items in the illustration are necessary spare parts for the water system ,that provided by users or the installer.

Attention:

Please follow these steps when using for the first time
1.Open valve and charge water.
2.Make sure that the pump and the water-in pipe have been filled with water.
3.Close the valve and start the unit.
ATTN: It is necessary that the water-in pipe is higher than the pool surface.

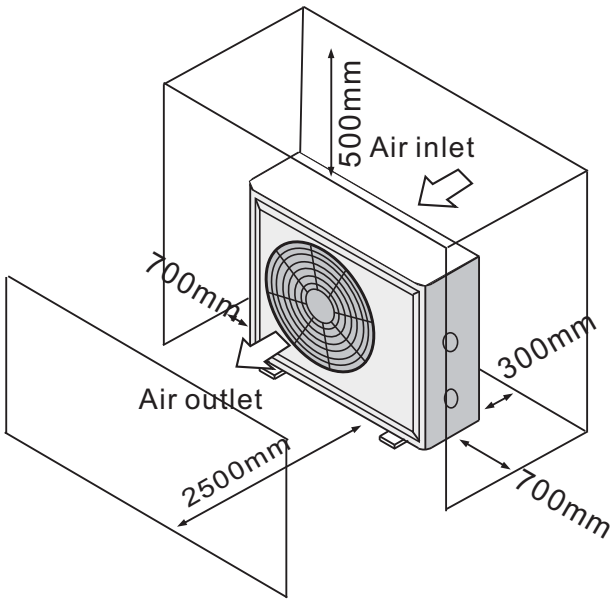
3.2 Swimming Pool Heat Pumps Location

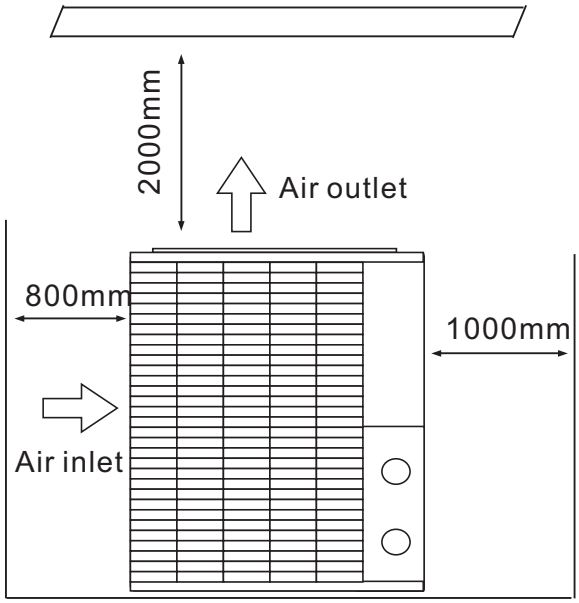
The unit will perform well in any outdoor location provided that the following three factors are presented:

1. Fresh Air - 2. Electricity - 3. Pool filter piping

The unit may be installed virtually anywhere outdoors. For indoor pools please consult the supplier. Unlike a gas heater, it has no draft or pilot light problem in a windy area.

DO NOT place the unit in an enclosed area with a limited air volume, where the units discharge air will be re-circulated.
DO NOT place the unit to shrubs which can block air inlet. These locations deny the unit of a continuous source of fresh air which reduces it efficiency and may prevent adequate heat delivery.





3.3 How Close To Your Pool?

Normally, the pool heat pump is installed within 7.5 metres of the pool. The longer the distance from the pool, the greater the heat loss from the piping. For the most part ,the piping is buried. Therefore, the heat loss is minimal for runs of up to15 meters(15 meters to and from the pump = 30 meters total), unless the ground is wet or the water table is high. A very rough estimate of heat loss per 30 meters is 0.6 kW-hour,(2000BTU) for every 5 ¡ difference in temperature between the pool water and the ground surrounding the pipe, which translates to

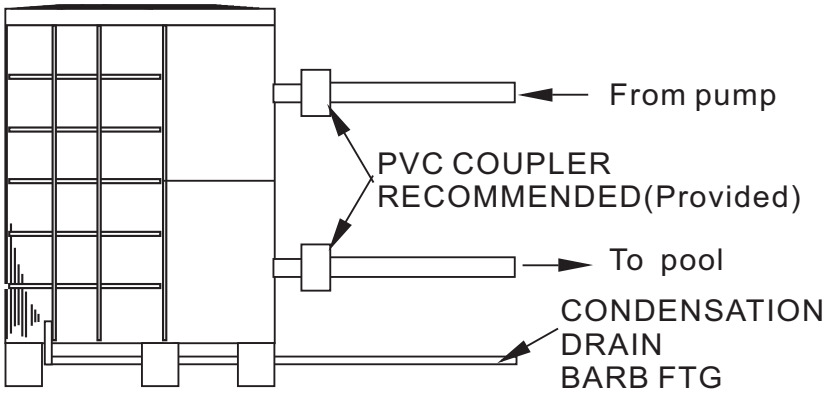
3.4 Swimming Pool Heat Pumps Plumbing

The Swimming Pool Heat Pumps exclusive rated flow titanium heat exchanger requires no special plumbing arrangements except bypass(please set the flow rate according to the nameplate). The water pressure drop is less than 10kPa at max. Flow rate. Since there is no residual heat or flame Temperatures, The unit does not need copper heat sink piping. PVC pipe can be run straight into the unit.

Location: Connect the unit in the pool pump discharge (return) line downstream of all filter and pool pumps, and upstream of any chlorinators, ozonators or chemical pumps.

Standard model have slip glue fittings which accept 32mm or 50 mm PVC pipe for connection to the pool or spa filtration piping. By using a 50 NB to 40NB you can plumb 40NB

Give serious consideration to adding a quick coupler fitting at the unit inlet and outlet to allow easy draining of unit for winterizing and to provide easier access should servicing be required.



Condensation: Since the Heat pump cools down the air about 4 -5¡, water may condense on the fins of the horseshoe shaped evaporator. If the relative humidity is very high, this could be as much as several litres an hour. The water will run down the fins into the basepan and drain out through the barbed plastic condensation drain fitting on the side of the basepan. This fitting is designed to accept 20mm clear vinyl tubing which can be pushed on by hand and run to a suitable drain. It is easy to mistake the condensation for a water leak inside the unit.

NB: A quick way to verify that the water is condensation is to shut off the unit and keep the pool pump running. If the water stops running out of the basepan, it is condensation. AN EVEN QUICKER WAY IS to TEST THE DRAIN WATER FOR CHLORINE - if the is no chlorine present, then it's condensation.

3.5 Swimming Pool Heat Pumps Electrical Wiring

NOTE: Although the unit heat exchanger is electrically isolated from the rest of the unit, it simply prevents the flow of electricity to or from the pool water. Grounding the unit is still required to protect you against short circuits inside the unit. Bonding is also required.

The unit has a separate molded-in junction box with a standard electrical conduit nipple already in place. Just remove the screws and the front panel, feed your supply lines in through the conduit nipple and wire-nut the electric supply wires to the three connections already in the junction box (four connections if three phase). To complete electrical hookup, connect Heat Pump by electrical conduit, UF cable or other suitable means as specified (as permitted by local electrical authorities) to a dedicated AC power supply branch circuit equipped with the proper circuit breaker, disconnect or time delay fuse protection.

Disconnect - A disconnect means (circuit breaker , fused or un-fused switch) should be located within sight of and readily accessible from the unit, This is common practice on commercial and residential air conditioners and heat pumps. It prevents remotely-energizing unattended equipment and permits turning off power at the unit while the unit is being serviced.

3.6 Initial startup of the Unit

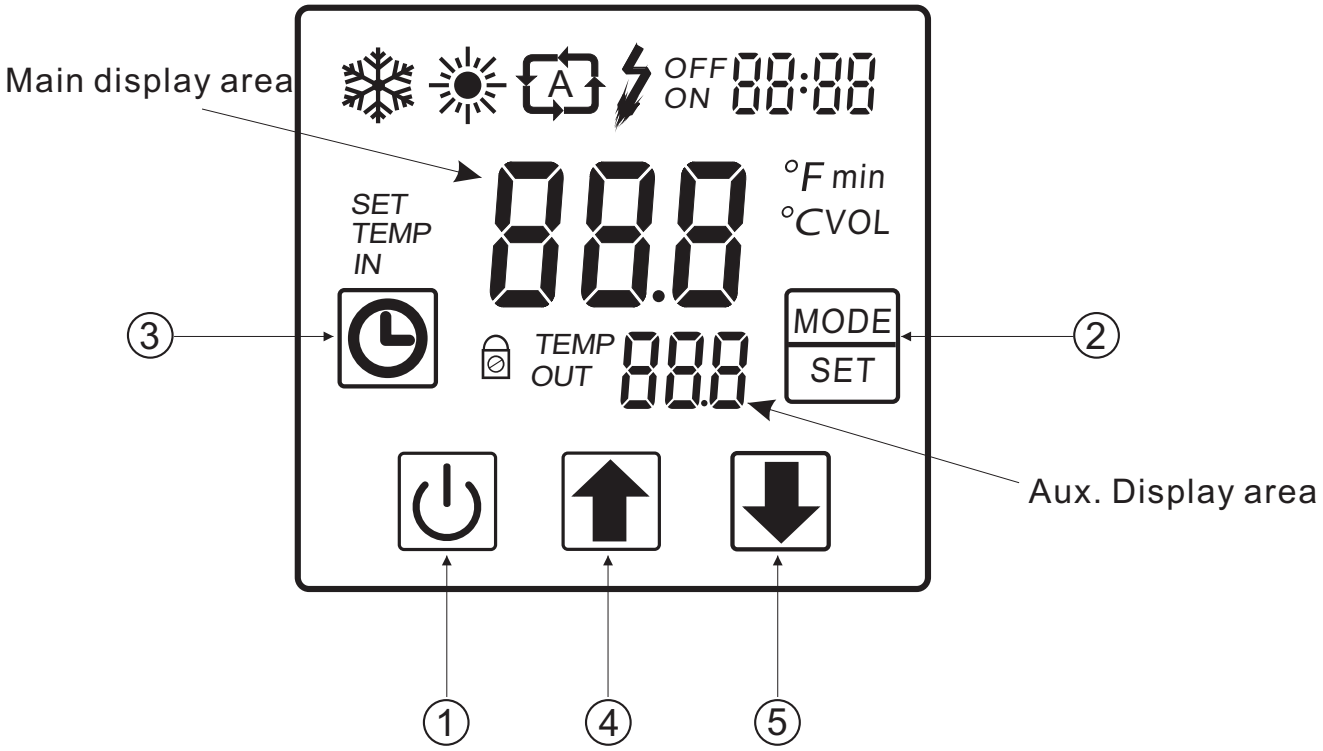
NOTE- In order for the unit to heat the pool or spa, the filter pump must be running to circulate water through the heat exchanger.

Start up Procedure - After installation is completed, you should follow these steps:
1. Turn on your filter pump. Check for water leaks and verify flow to and from the pool.
2. Turn on the electrical power supply to the unit, then press the key ON/OFF of wire controller, It should start in several seconds.
3. After running a few minutes make sure the air leaving the top(side) of the unit is cooler(Between 5-10 ¡)
4. With the unit operating turn the filter pump off. The unit should also turn off automatically,
5. Allow the unit and pool pump to run 24 hours per day until desired pool water emperature is reached. When the water-in temperature reach setting, The unit just shuts off. The unit will now automatically restart (as long as your pool pump is running)when the pool temperature drops more than 2¡below set temperature.

Time Delay- The unit is equipped with a 3 minute built-in solid state restart delay included to protect control circuit components and to eliminate restart cycling and contactor chatter. This time delay will automatically restart the unit approximately 3 minutes after each control circuit interruption. Even a brief power interruption will activate the solid state 3 minute restart delay and prevent the unit from starting until the 5 minute countdown is completed. Power interruptions during the delay period will have no effect on the 3 minute countdown.

4. USAGE AND OPERATION

4.1 Function of controller



Button functions:

NO	Symbol	Name	Function
①		On/off	Press this button can start up or shut down the unit, cancel the current operation or back to the upper interface
②	MODE SET	Mode	Press this button can switch modes or save parameter setting.
③		Clock	Press this button can set the clock and timer
④		Up	Press this button can move up or increase parameter value.
⑤		Down	Press this button can move down or decrease the parameter value.

4. USAGE AND OPERATION

Display functions:

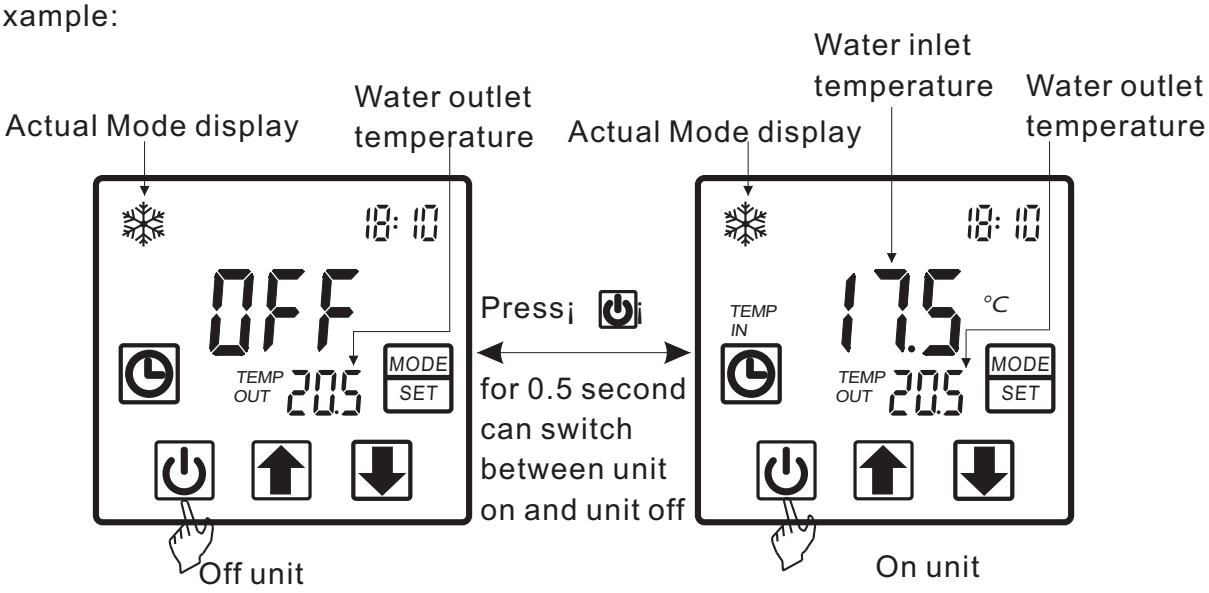
Symbol	Meaning	Function
	Cooling	It is showed when the unit in cooling mode.
	Heating	It is showed when the unit in heating mode and flashed in defrosting.
	Automatic	It is showed when the unit in automatic mode.
	Electric-heating	It is showed when the unit in electric-heating mode.
ON	Timer on	It is showed when the unit sets the timer on
OFF	Timer off	It is showed when the unit sets the timer off
IN	Inlet water	It is showed when the main display area gives the inlet water temperature.(measured value)
OUT	Outlet water	It is showed when the AUX display area gives the outlet water temperature.(measured value)
TEMP	Temperature	It is showed when the main/ AUX display area gives temperature
VOL	Flow	It is showed when the main display area gives the water flow value
min	Minute	It is showed when the main display area gives minute value
°F	Fahrenheit	It is showed when the main/AUX display area gives Fahrenheit value
°C	Centigrade	It is showed when the main/AUX display area gives centigrade value
SET	Parameter setting	It is showed when the parameter can be setted.
	Lock	It is showed when the keyboard is locked.

4.2.The controller usage

4.2.1Starting up and shutting down

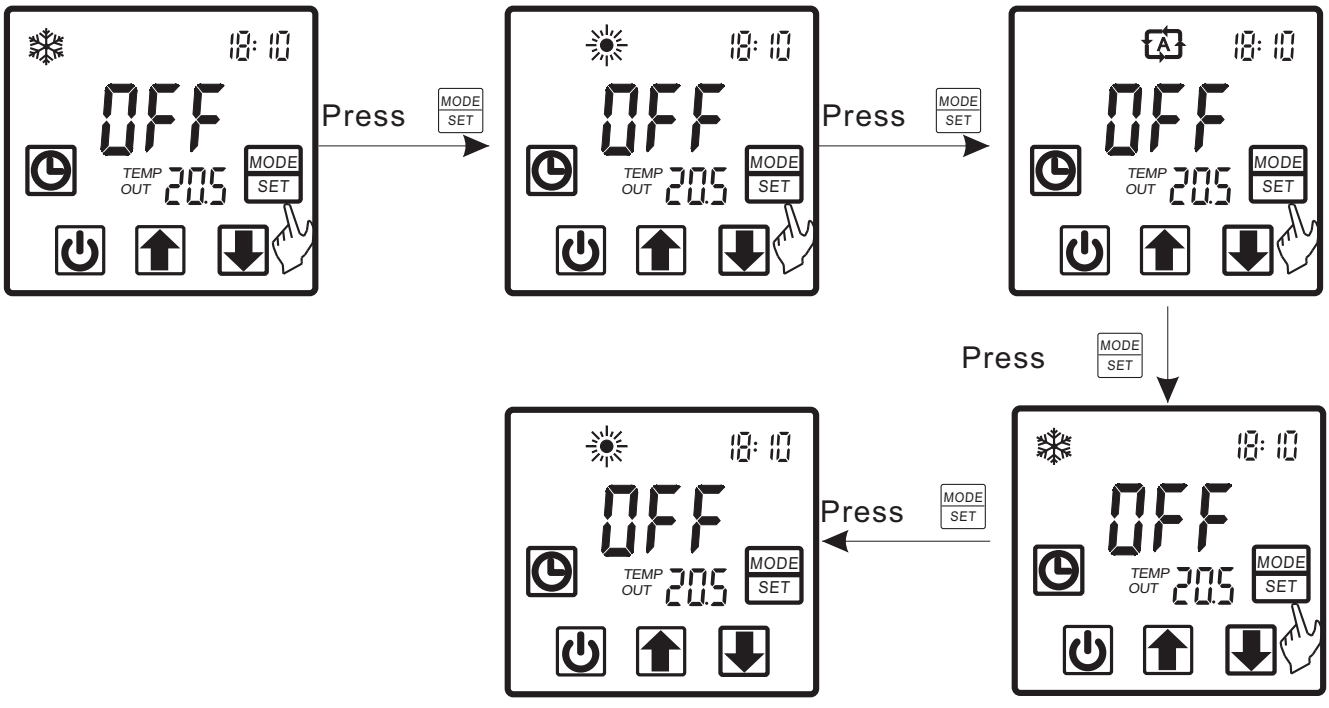
In the off interface, press" ⏻ " for 0.5s can start up the unit, and aux. display-area shows water outlet temperature; In the running interface, press" ⏻ " for 0.5s can shut down the unit and aux. display-area shows ¡OFF¡.

Attention: the operation of Starting up and shutting down can only be done in the main interface.
For example:



4.2.2 Modes switching

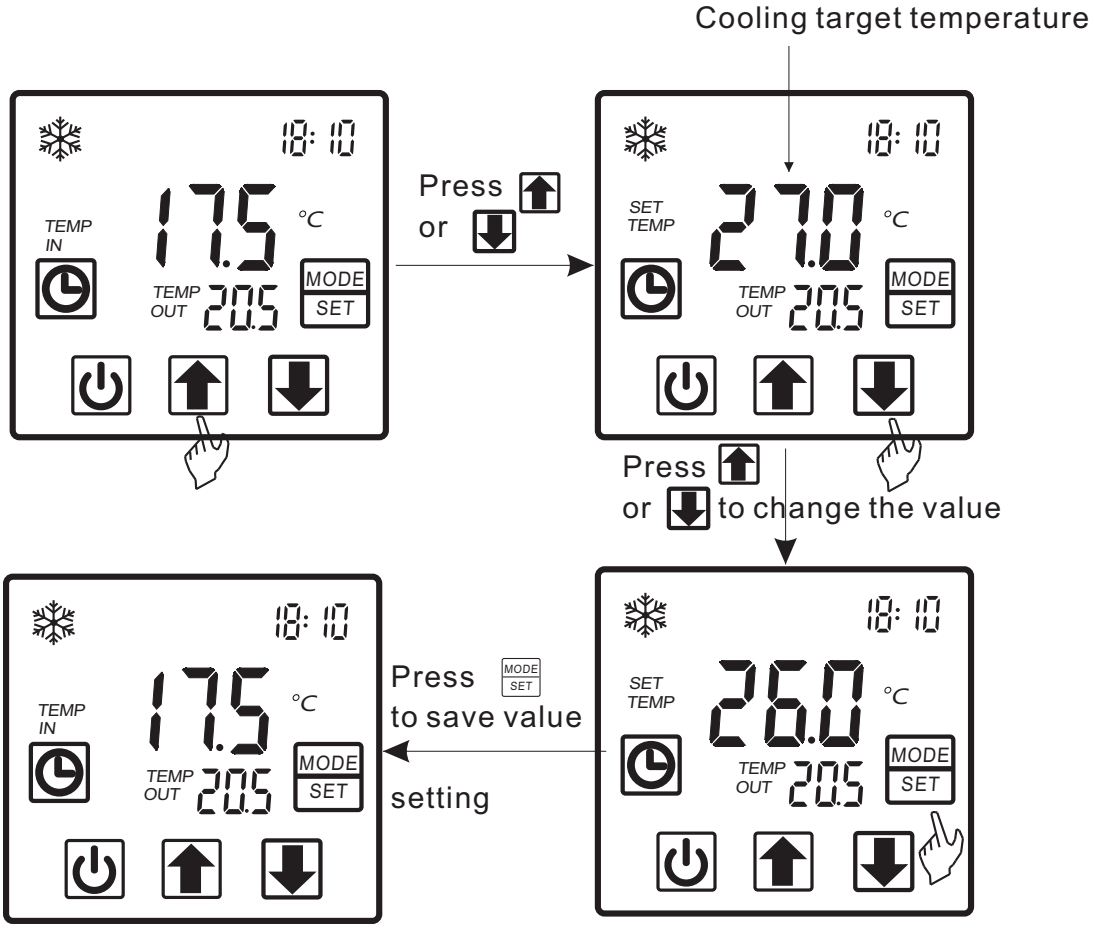
If it is cold/ heat unit, in the main interface, you can switch different modes of cooling, heating, auto mode by pressing MODE SET If it is cold/heat and electric heat unit, in the main interface, you can switch different modes of cooling, heating, auto mode, electric heating mode, heating and electric heating modes by pressing MODE SET
Attention: The modes switching is useless if the unit you buy is single-cold/ single-heat unit.
For example:



4.2.3 Temperature setting

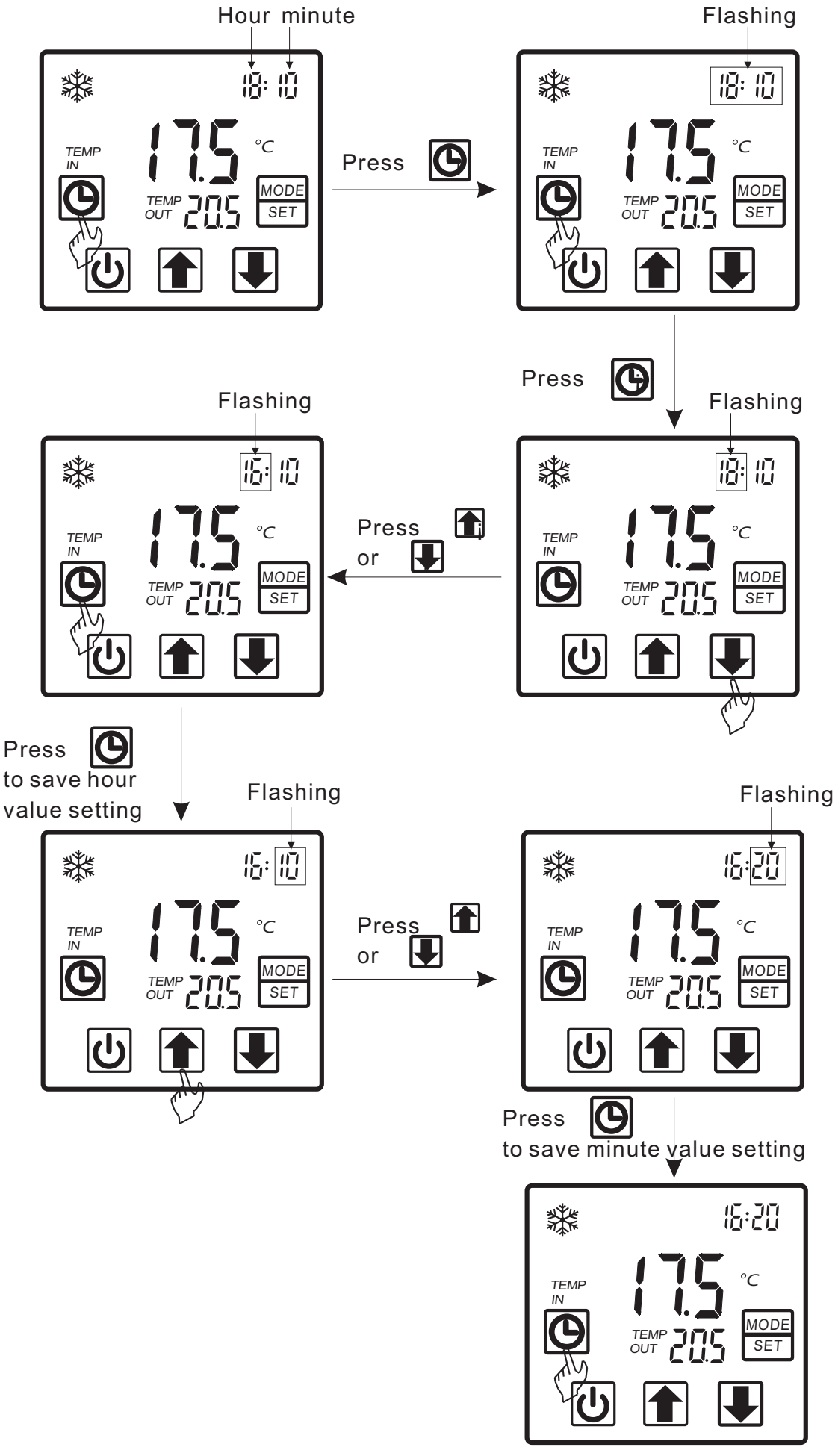
In the main interface press ↑ or ↓ and the current mode target-temperature flashes, then press ↑ to increase the temp.value, or press ↓ to decrease it.
Press MODE/SET can save setting parameter and back to the main interface
Press ⏻ can not save setting parameter but back to the main interface
Attention£If there is no operation for 5s system would remember parameter setting and back

For example:



4.2.4 Clock setting

In the main interface press 🕒 twice, hours will start to flash and press ↑ to increase value or press ↓ to decrease value and press 🕒 to save setting
At the same time, minute start to flashing press ↑ to increase value or press ↓ to decrease value and press 🕒 to save setting.
Press ⏻ can not save setting parameter and back to main interface.
Attention: If there is no operation for 5s system will remember parameter setting and back to the main interface.
For example:


Hour minute
Flashing
Press
Press
Flashing
Flashing
Press
or
Press
to save hour
value setting
Flashing
Flashing
Press
or
Press
to save minute value setting
TEMP IN
TEMP OUT
17.5
°C
20.5
MODE
SET

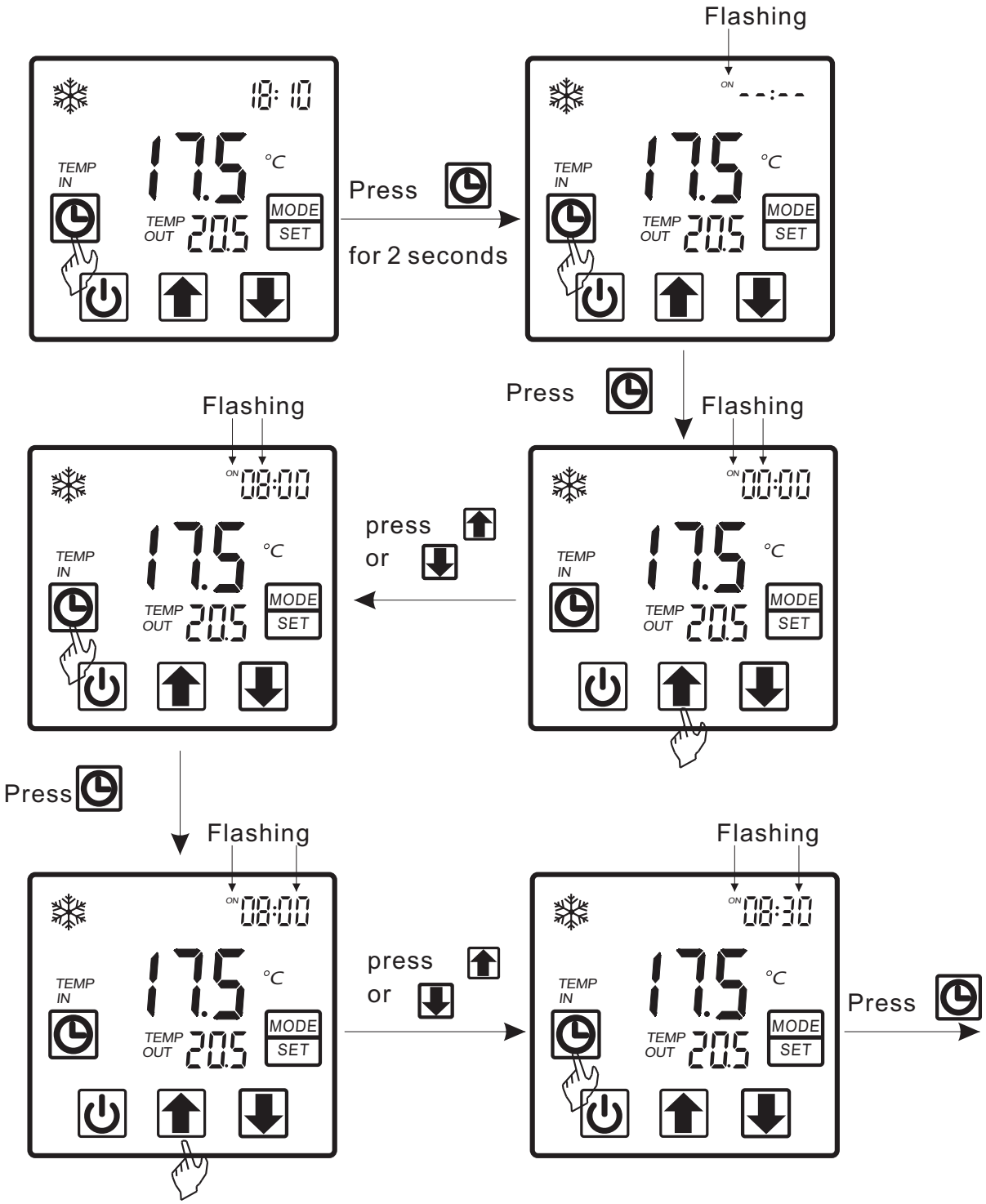
4.2.5 Timer setting

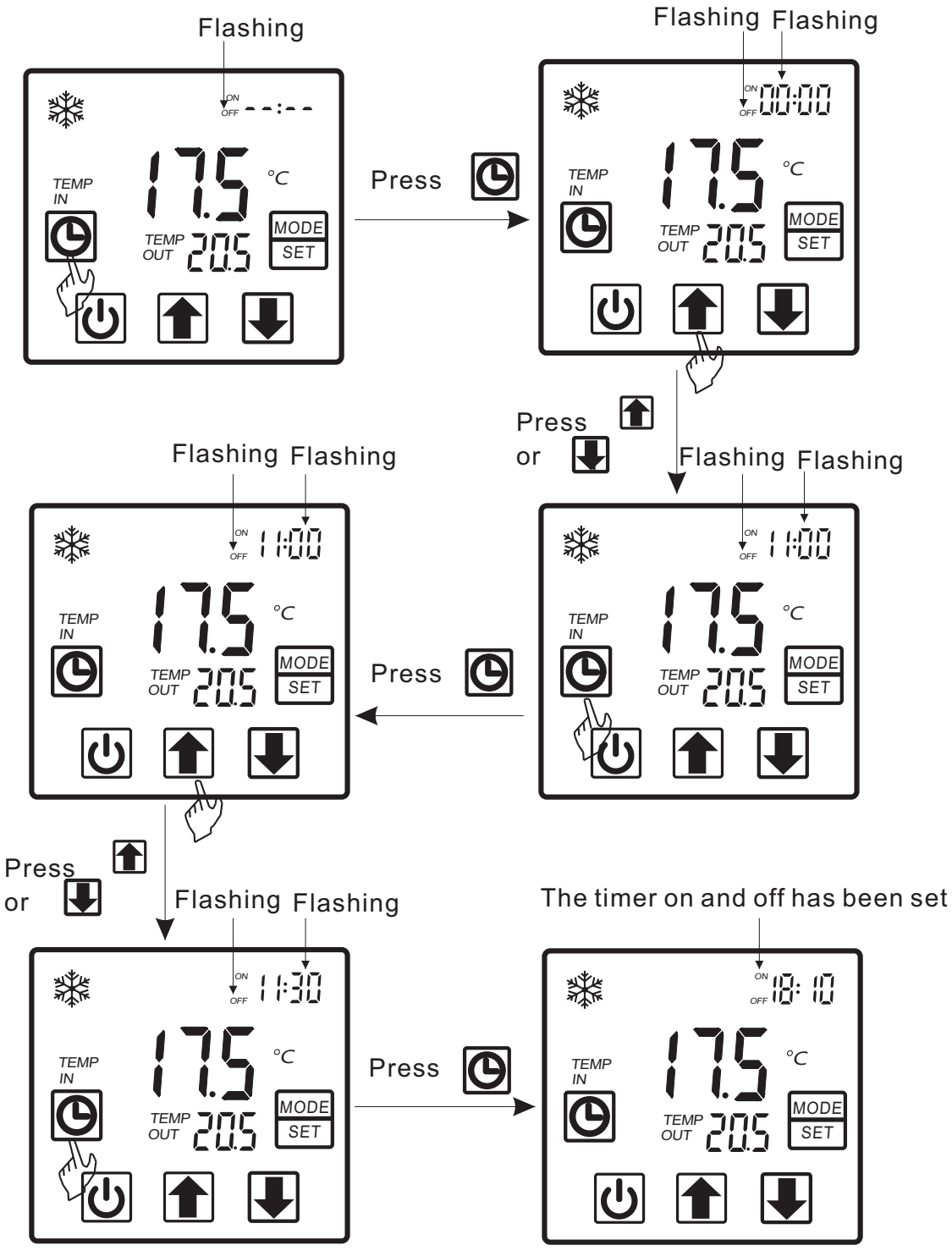
In the main interface press hold on 2 seconds and "on" is flashing, at this time, you can set the timer on means the unit timer is on then press again and hold on 2 seconds and "off" is flashes you can set the timer off means the unit timer is off.

If you want cancel the timer off, In the "off" flashing interface press to cancel

Attention 1) If there is no operation for 5s, the system will remember clock setting and back to the main interface.

2) By pressing " " till the "off" flashing, you can set the timer off without timer on.



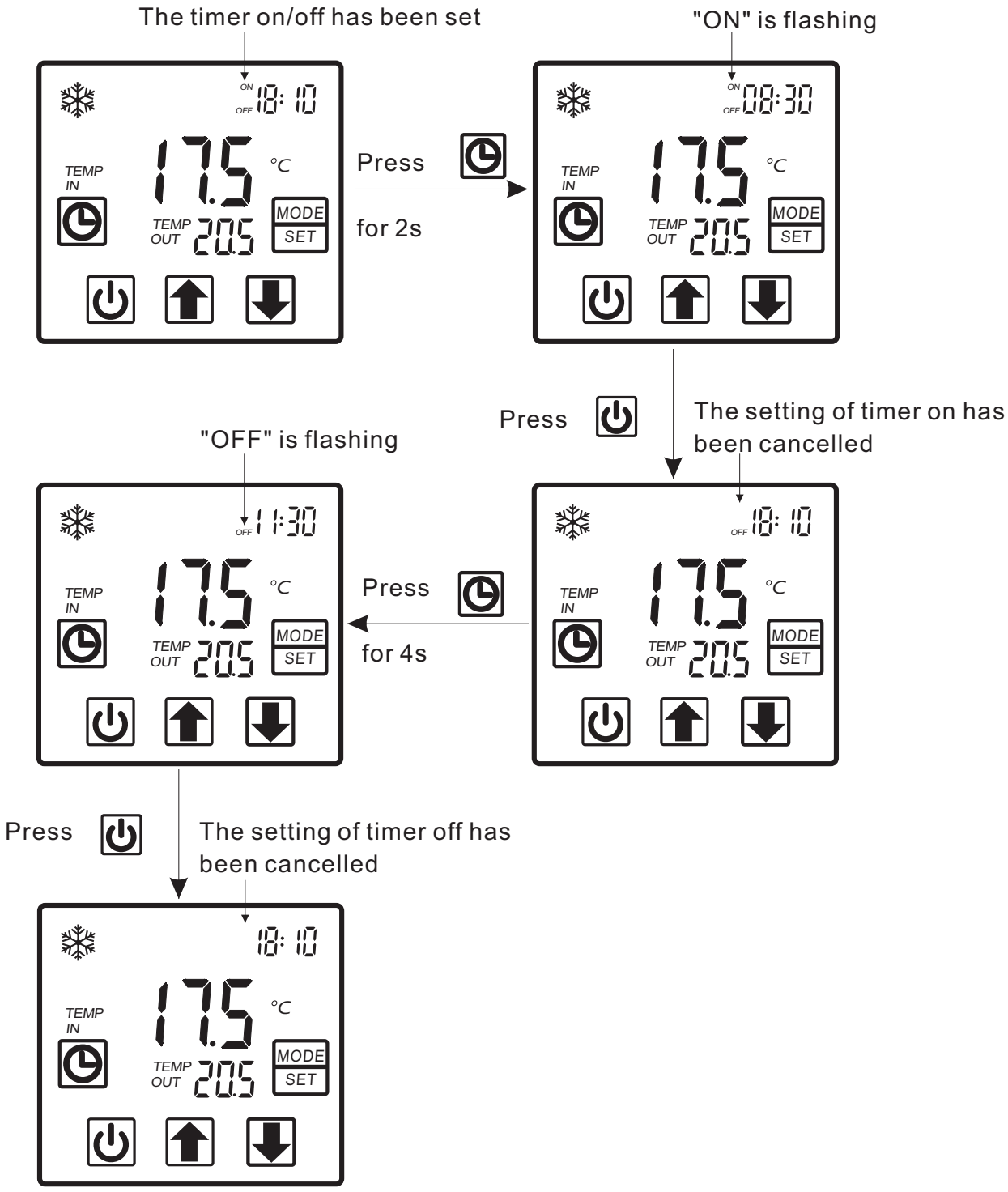

Flashing
Press
Flashing Flashing
Press
or
Flashing Flashing
Flashing Flashing
Press
Press
or
Flashing Flashing
Press
The timer on and off has been set
TEMP IN
TEMP OUT
MODE
SET
°C

4.2.6 Cancel the timer setting

Press for 2s and "ON" is flashing at this time, press to cancel the setting of timer on;

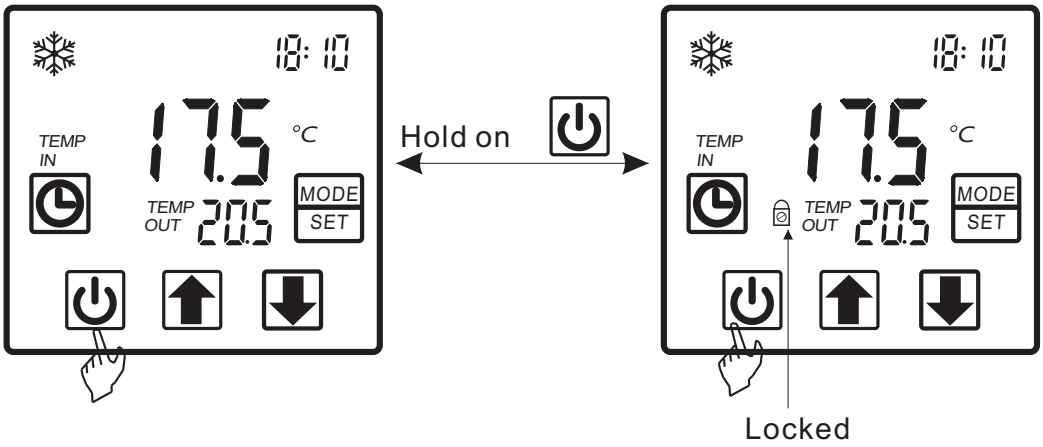
It is the same way to cancel the setting of timer off .

For example:



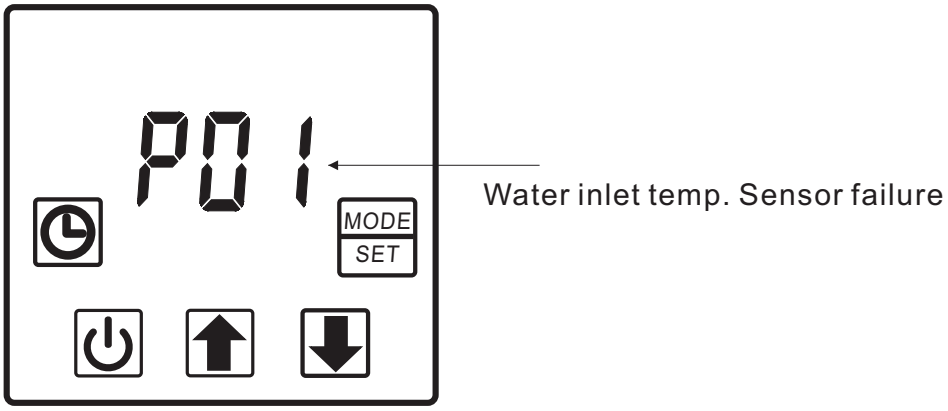
4.2.7 Keyboard lock

To avoid mis-operation, please lock the controller after parameter setting.
At the main interface, press ⏻ for 5 seconds, the keyboard will be locked.
When the keyboard is locked, press ⏻ or 5 seconds, the keyboard will be unlocked.
NOTES: When the unit is in alarming state, the key lock can be removed automaticly.



4.2.8 Malfunction display

There will be malfunction code showing on the controller screen when relative malfunction occurs.
You can refer to the malfunction table to find out the failure cause and solution.
For example：



4.3 Parameter table

Meaning	Default	Remark
Heating inlet target temp.	27ºC	Adjustable
Cooling inlet target temp.	27ºC	Adjustable
Auto inlet target temp.	27ºC	Adjustable

5.1 Maintenance

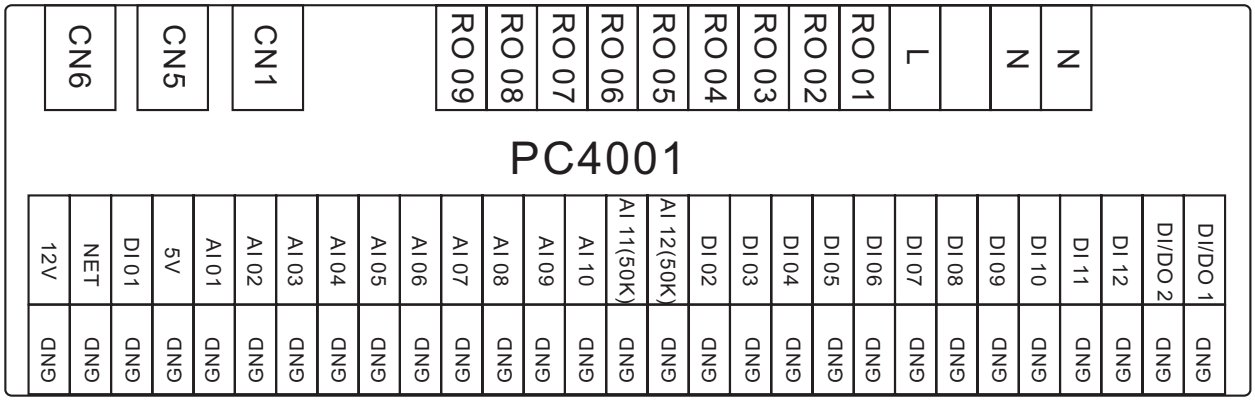
- Check the water supply device and the release often. You should avoid the condition of no water or air entering into system, as this will influence unit's performance and reliability. You should clear the pool/spa filter regularly to avoid damage to the unit as a result of the dirty of clogged filter.
- The area around the unit should be dry, clean and well ventilated. Clean the side heating exchanger regularly to maintain good heat exchange as conserve energy .
- The operation pressure of the refrigerant system should only be serviced by a certified technician .
- Check the power supply and cable connection often,.Should the unit begin to operate abnormally, switch it off and contact the qualified technician.
- Discharge all water in the water pump and water system ,so that freezing of the water in the pump or water system does not occur. You should discharge the water at the bottom of water pump if the unit will not be used for an extended period of time. You should check the unit thoroughly and fill the system with water fully before using it for the first time after a

5.2 Malfunction table

You can refer to the malfunction table to find out the failure cause and solution.

malfunction	display	Indicator	Reason	resolution
Power on		Off		
Normal working		On		
Inlet temp. Sensor failure	P01	1 On 1 off	The temp. Sensor is broken or short circuit	Check or change the temp. Sensor
Outlet temp. Sensor failure	P02	2 on 1 off	The temp. Sensor is broken or short circuit	Check or change the temp. Sensor
Recovery temp. Sensor failure	P033	3 on 1 off	The temp. Sensor is broken or short circuit	Check or change the temp. Sensor
Ambient temp. Sensor failure	P04	4 on 1 off	The temp. Sensor is broken or short circuit	Check or change the temp. Sensor
Coil 1 temp. Sensor failure	P15	5 on 1 off	The temp. Sensor is broken or short circuit	Check or change the temp. Sensor
Coil 2 temp. Sensor failure	P25	5 on 1 off	The temp. Sensor is broken or short circuit	Check or change the temp. Sensor
Suction 1 temp. Sensor failure	P17	7 on 1 off	The temp. Sensor is broken or short circuit	Check or change the temp. Sensor
Suction 1 temp. Sensor failure	P27	7 on 1 off	The temp. Sensor is broken or short circuit	Check or change the temp. Sensor
Discharge 1 temp. Sensor failure	P181	8 on 1 off	The temp. Sensor is broken or short circuit	Check or change the temp. Sensor
Discharge 2 temp. Sensor failure	P182	8 on 1 off	The temp. Sensor is broken or short circuit	Check or change the temp. Sensor
Antifreezing 1 temp. Sensor failure	P19	9 on 1 off	The temp. Sensor is broken or short circuit	Check or change the temp. Sensor
Antifreezing 2 temp. Sensor failure	P29	9 on 1 off	The temp. Sensor is broken or short circuit	Check or change the temp. Sensor
High pressure1 protection	E11	11 on 1 off	The high-preesure switch is broken	Check the pressure switch and cold circuit
High pressure2 protection	E21	11 on 1 off	The high-preesure switch is broken	Check the pressure switch and cold circuit
Low pressure1 protection	E12	12 on 1 off	The low-preesure switch is broken	Check the pressure switch and cold circuit
Low pressure2 protection	E22	12 on 1 off	The low-preesure switch is broken	Check the pressure switch and cold circuit
Water flow failure	E03	13 on 1 off	No water/little water in water system	Check the pipe water flow and water pump
Water flow over-low failure	E035	13 on 1 off	No water/little water in water system	Check the pipe water flow and water pump
Elctrical-heat over heat failure	E04	14 on 1 off	Electrical-heat is over heat	Check or change electrical-heat
Compressor 1 overload failure	E101	21 on 1 off	Compressor is overload	Check the compressor functionality
Compressor 2 overload failure	E201	21 on 1 off	Compressor is overload	Check the compressor functionality
Water-inlet and outlet temp. difference	E06	16 on 1 off	Water flow is not enough and low differential pressure	Check the pipe water flow and whether water system is jammed or not
The system 1use side antifreezing protection	E171	17 on 1 off	Water flow is not enough	Check the pipe water flow and whether water system is jammed or not
The system 2 use side antifreezing protection	E271	17 on 1 off	Water flow is not enough	Check the pipe water flow and whether water system is jammed or not
The system 1heat source side antifreezing protection	E172	17 on 1 off	Water flow is not enough	Check the pipe water flow and whether water system is jammed or not
The system 2 heat source side antifreezing protection	E272	17 on 1 off	Water flow is not enough	Check the pipe water flow and whether water system is jammed or not
The primary anti-freezing protection	E19	19 on 1 off	The ambient temp. Is low	/
The secondary anti-freezing protection	E29	19 on 1 off	The ambient temp. Is low	/
Discharge Temp. Of system 1 is too high	P182	8 on 1 off	The compressor is overload	Check the compressor functionality
Discharge Temp. Of system 2 is too high	P282	8 on 1 off	The compressor is overload	Check the compressor functionality
System protection	E05	8 on 1 off	The protection system is failure	Check each protection point of the system
Defrosting		Flashing	/	/
Communication failure	E08	/	Communication failure between wire controller and main board	Check the wire connection between remote wire controller and main board

Appendix 1.Connection of PCB illustration

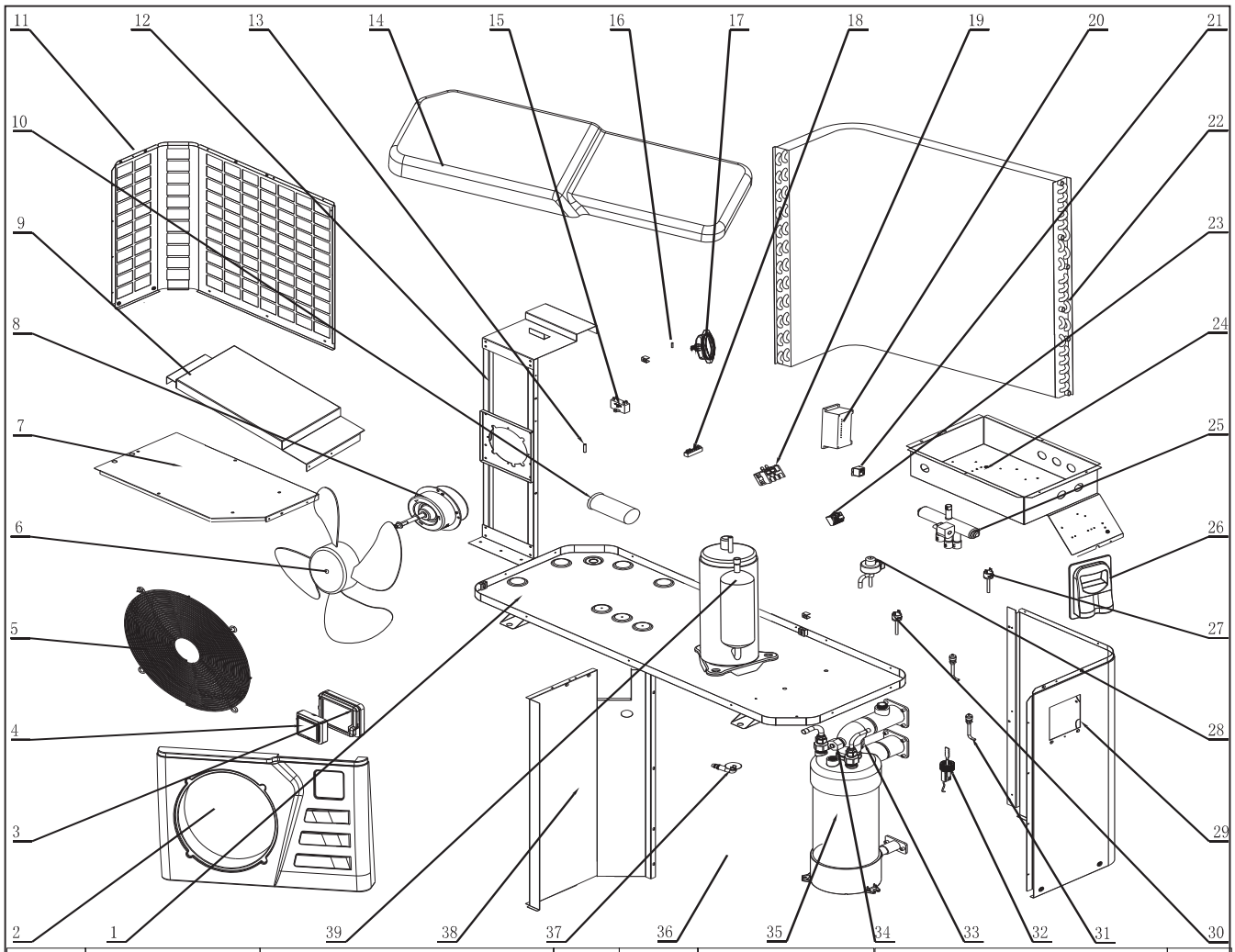


Connections explanation:

NO.	Symbol	Meaning	NO.	Symbol	Meaning
1	AC-L	Live line	21	DI 07	Water flow switch protection input
2	AC-N	Null line	22	DI 08	Electric heater overload protection input
3	RO 01	Compressor 1 output(220VAC)	23	DI 09	Compressor 1 overload protection input
4	RO 02	Compressor 2 output(220VAC)	24	DI 10	Compressor 2 overload protection input
5	RO 03	High speed of fan output(220VAC)	25	DI 11	System protection input
6	RO 04	Low speed of fan output(220VAC)	26	DI 12	Emergency switch input
7	RO 05	Water pump output(220VAC)	27	AI 01	Water input temperature input
8	RO 06	4-way valve output(220VAC)	28	AI 02	Water output temperature output
9	RO 07	Electric heater output(250VAC)	29	AI 03	System 1 fan coil temperature input
10	RO 08	Spray valve output(220VAC)	30	AI 04	System 2 fan coil temperature input
11	RO 09	Alarm system output(220VAC)	31	AI 05	Ambient temperature input
12	DI/DO 1	Mode indicator output	32	AI 06	System 1 antifreeze temperature input
13	DI/DO 2	Emergency switch output	33	AI 07	System ١ antifreeze temperature input
14	DI 01	Flow rate input	34	AI 08	System 1 suction temperature input
15	DI 02	System 1 high pressure protection input	35	AI 09	System 2 suction temperature input
16	DI 03	System 1 low pressure protection input	36	AI 10	No use
17	DI 04	System 2 high pressure protection input	37	AI 11(50K)	System 1 discharging temperature input
18	DI 05	System 2 low pressure protection input	38	AI 12(50K)	System 2 discharging temperature input
19	NET GND ١٢V	Connecting to the remote controller	39	CN1	System 2 electric expansion valve output
20	DI 06	Phase sequence protection	40	CN6	System 1 electric expansion valve output

Appendix 2 : Explosive view of the unit

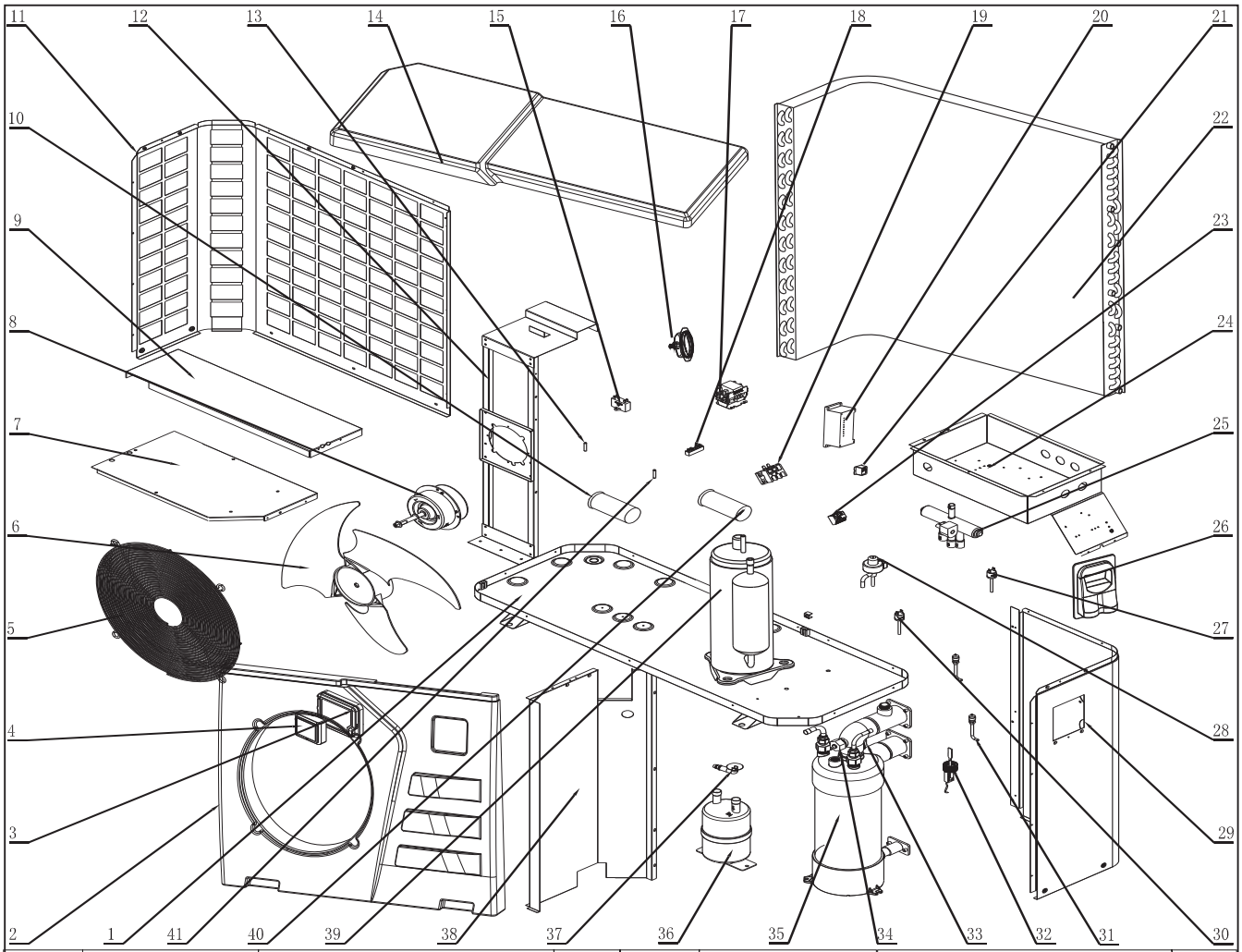
MODEL Hydro-Pro+ Premium 10



NO.	Code	Part name	Note	NO.	Code	Part name	Note
1	32008-210098	chassis		22	32008-120009	condenser	
2	32008-220035	front plate		23	2000-3909	2-way wire connector	
3	20000-220068	weatherproof box		24	32012-210078	controller box	
4	95005-310210	LCD wire controller		25	2004-1437	4-way valve	
5	32012-210080	fan grill		26	32009-220029	wiring box£black£	
6	3500-2701	axial fan		27	2000-3603	low pressure switch	
7	32012-210079	controller box cover		28	2002-1451	electronic expansion valve	
8	20000-330022	axial fan motor		29	32008-210096	right plate	
9	32008-210099	strutting board		30	2001-3605	high pressure switch	
10	2000-3510	compressor capacitor		31	20000-140150	needle valve	
11	32008-210097	back grill		32	20000-360005	water flow switch	
12	32012-210108	motor trestle		33	2000-3242	outlet water temp sensor	
13	2000-3242	ambient temp sensor		34	2000-3242	inlet water temp sensor	
14	32008-210036	top cover		35	32008-120008	titanium heat exchanger	
15	2000-3501	fan motor capacitor		36	3500-1401	liquid-vapor separator	
16	2000-1415	screw		37	3400-2203	drain-pipe joint	
17	2000-2802	pressure meter		38	32008-210095	center spacer	
18	4000-3901	5-way wire connector		39	2001-1163	compressor(N21)	
19	20000-340060	3-way cored wire					
20	95005-310114	Pc4001 controller					
21	2000-3619	relay					

Appendix 2 : Explosive view of the unit

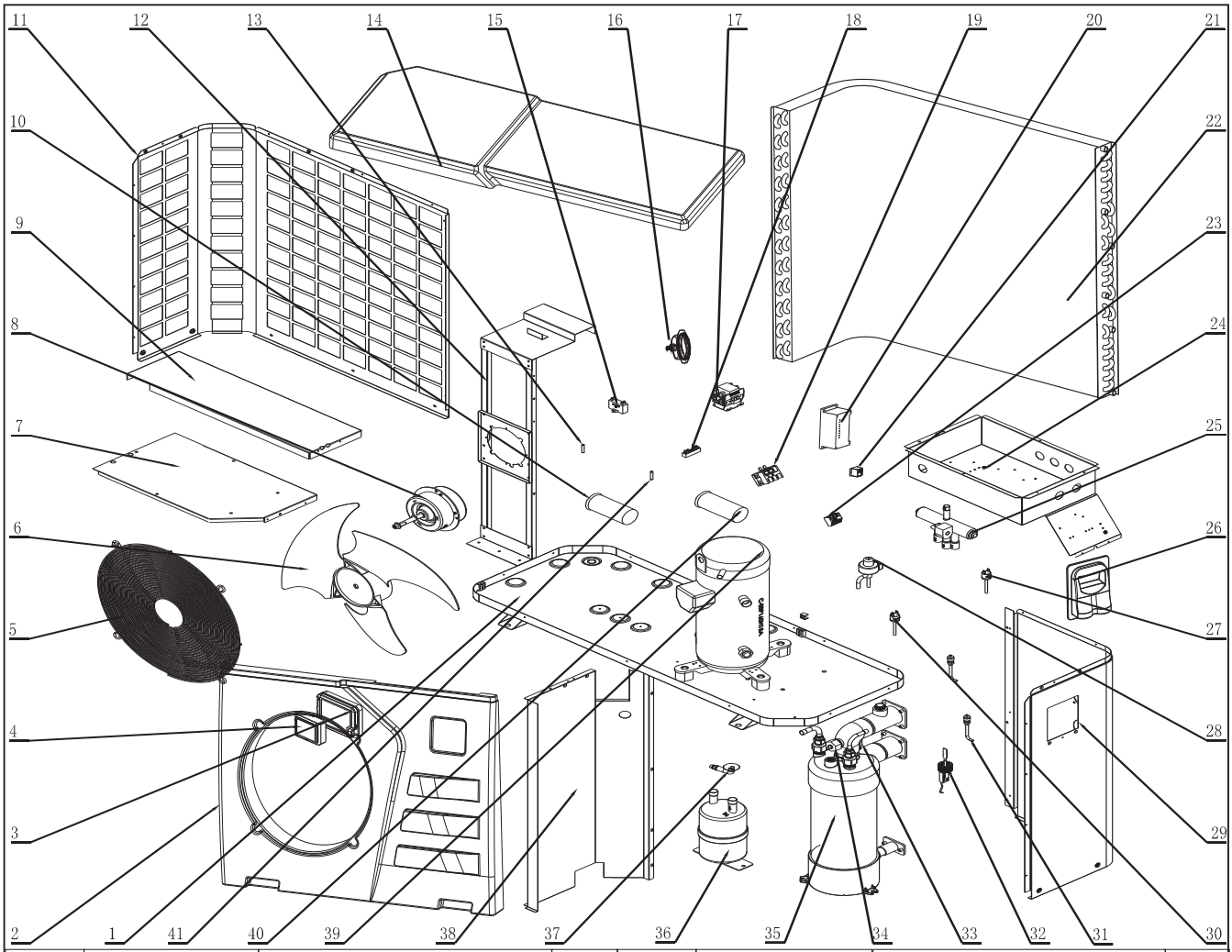
MODEL Hydro-Pro+ Premium14



NO.	Code	Part name	Note	NO.	Code	Part name	Note
1	32009-210128	chassis		22	35012-120001	condenser	
2	32009-220028	front plate		23	20000-340060	3-cored wire	
3	20000-220068	weatherproof box		24	32009-210125	controller box	
4	95005-310210	LCD wire controller		25	2001-1491	4-way valve	
5	34006-210049	fan grill		26	32009-220029	wiring box black	
6	2000-2705	axial fan		27	2000-3603	low pressure switch	
7	32009-210024	controller box cover		28	20000-140151	electronic expansion valve	
8	20000-330019	axial fan motor		29	32009-210131	right plate	
9	32009-210025	strutting board		30	2001-3605	high pressure switch	
10	2000-3510	compressor capacitor		31	20000-140150	needle valve	
11	32009-210130	back grill		32	20000-360005	water flow switch	
12	32009-210129	motor trestle		33	2000-3242	outlet water temp sensor	
13	2000-3242	ambient temp sensor		34	2000-3242	inlet water temp sensor	
14	32009-220027	top cover		35	32009-120013	titanium heat exchanger	
15	2000-3508	fan motor capacitor		36	3500-1401	liquid-vapor separator	
16	2000-3802	pressure meter		37	3400-2203	drain-pipe joint	
17	20000-360007	1-phase AC contactor		38	32009-210124	center spacer	
18	2000-3909	2-way wire connector		39	20000-110027	compressor (H51)	
19	4000-3901	5-way wire connector					
20	95005-310114	Pc4001controller					
21	2000-3619	relay					

Appendix 2 : Explosive view of the unit

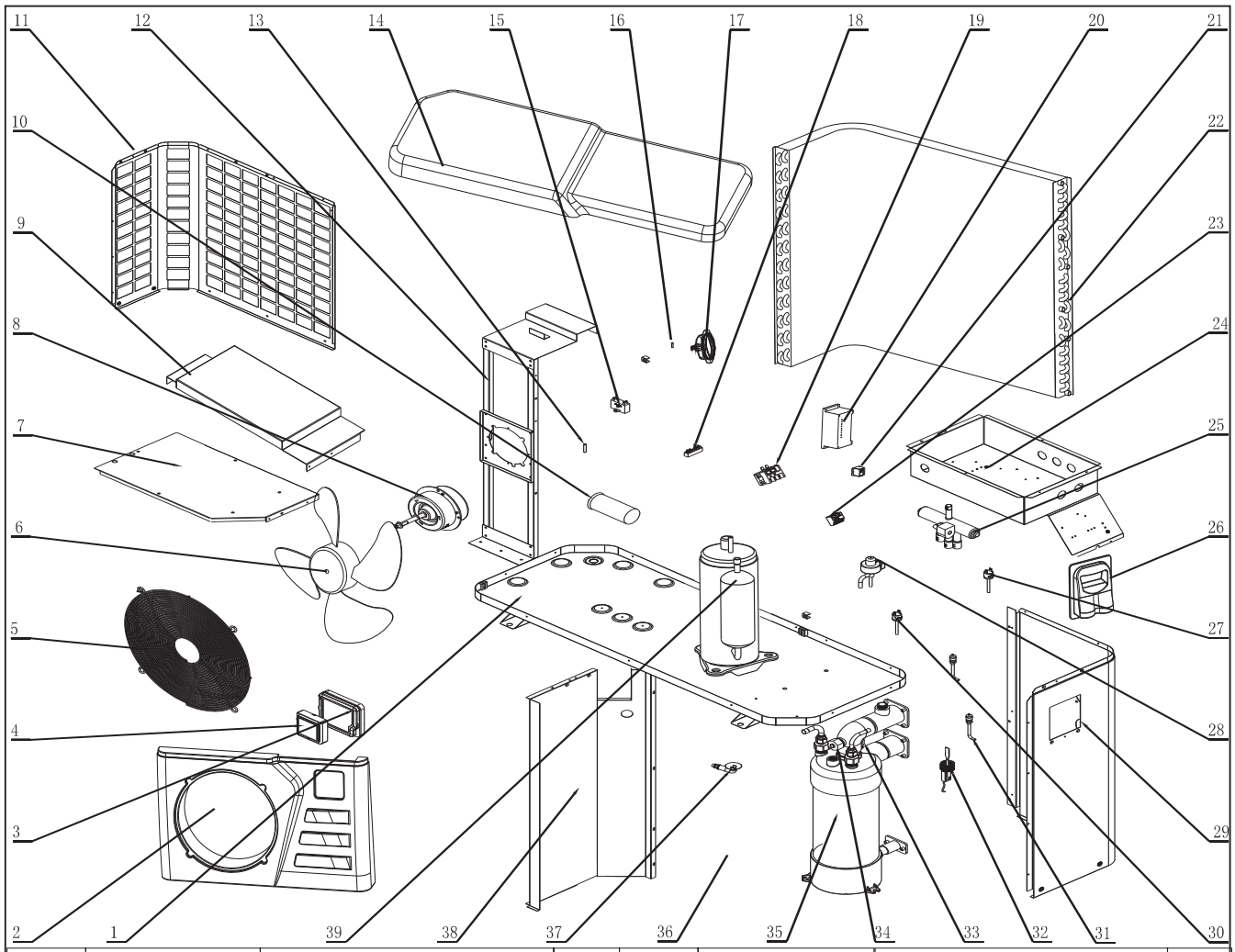
MODEL Hydro-Pro+ premium19



NO.	Code	Part name	Note	NO.	Code	Part name	Note
1	32009-210128	chassis		22	35012-120001	condenser	
2	32009-220028	front plate		23	2000-3933	3-way wire connector	
3	20000-220068	weatherproof box		24	32009-210125	controller box	
4	95005-310210	LCD wire controller		25	2001-1491	4-way valve	
5	34006-210049	fan grill		26	32009-220029	wiring box (black)	
6	2000-2705	axial fan		27	2000-3603	low pressure switch	
7	32009-210024	controller box cover		28	20000-140151	electronic expansion valve	
8	20000-330019	axial fan motor		29	32009-210131	right plate	
9	32009-210025	strutting board		30	2001-3605	high pressure switch	
10	2000-3524	compressor capacitor		31	20000-140150	needle valve	
11	32009-210130	back grill		32	20000-360005	water flow switch	
12	32009-210129	motor trestle		33	2000-3242	outlet water temp sensor	
13	2000-3242	ambient temp sensor		34	2000-3242	inlet water temp sensor	
14	32009-220027	top cover		35	32009-120013	titanium heat exchanger	
15	2000-3508	fan motor capacitor		36	3500-1401	liquid-vapor separator	
16	2000-3802	pressure meter		37	3400-2203	drain-pipe joint	
17	20000-360007	1-phase AC contactor		38	32009-210124	center spacer	
18	2000-3909	2-way wire connector		39	20000-110053	compressor(S76)	
19	2000-3920	3-way wire connector					
20	95005-310114	PC4001controller					
21	2000-3619	relay					

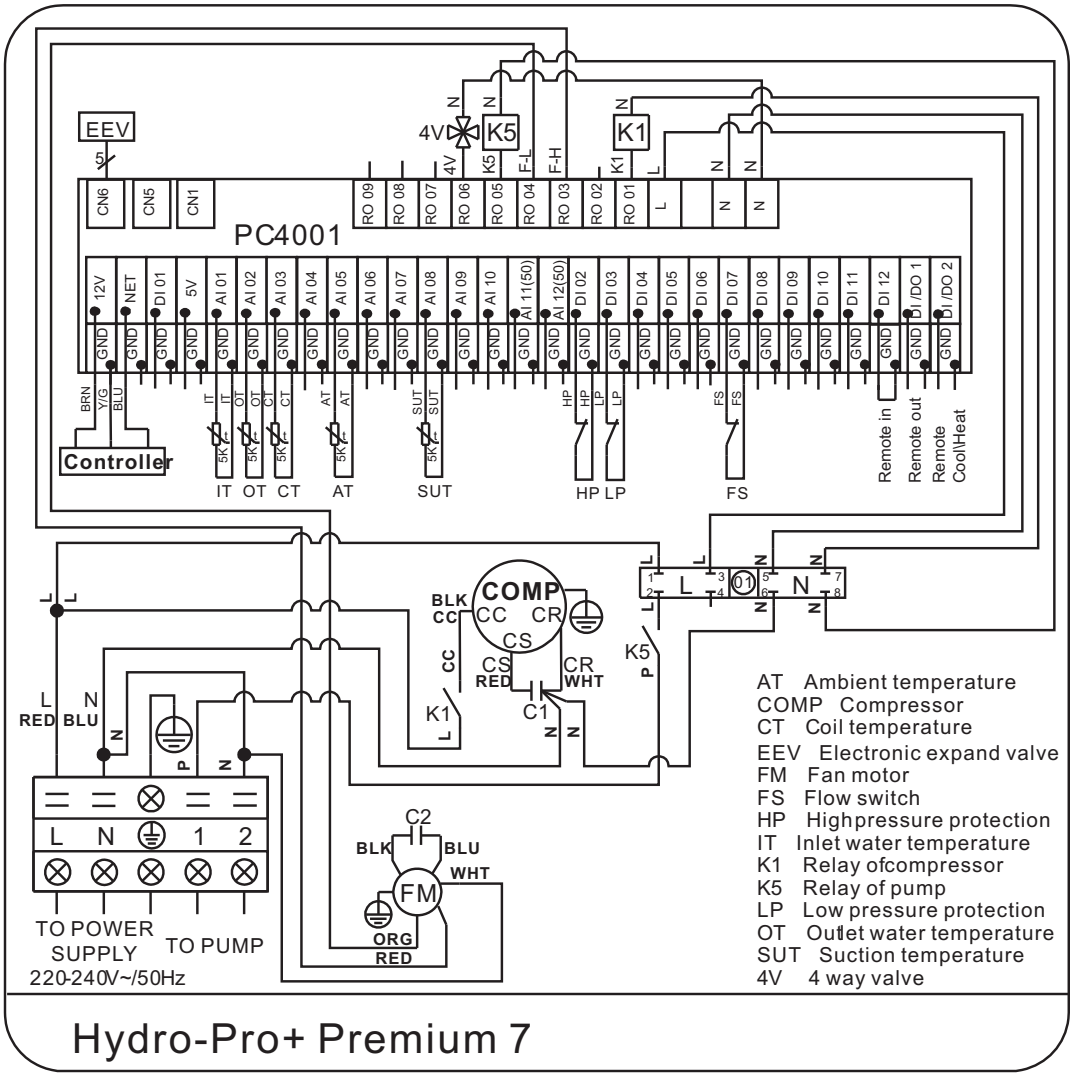
Appendix 2 : Explosive view of the unit

MODEL Hydro-Pro+ Premium 7



NO.	Code	Part name	Note	NO.	Code	Part name	Note
1	32008-210098	chassis		22	3406-1204	condenser	
2	32008-220035	front plate		23	2000-3909	2-way wire connector	
3	20000-220068	weatherproof box		24	32012-210078	controller box	
4	95005-310210	LCD wire controller		25	2001-1418	4-way valve	
5	32012-210080	fan grill		26	32009-220029	wiring box black	
6	3500-2701	axial fan		27	2000-3603	low pressure switch	
7	32012-210079	controller box cover		28	2003-1402	electronic expansion valve	
8	20000-330022	axial fan motor		29	32008-210096	right plate	
9	32008-210099	strutting board		30	2001-3605	high pressure switch	
10	2000-3504	compressor capacitor		31	20000-140150	needle valve	
11	32008-210097	back grill		32	20000-360005	water flow switch	
12	32012-210108	motor trestle		33	2000-3242	outlet water temp sensor	
13	2000-3242	ambient temp sensor		34	2000-3242	inlet water temp sensor	
14	32008-210036	top cover		35	32025-120005	titanium heat exchanger	
15	2000-3501	fan motor capacitor		36	3500-1401	liquid-vapor separator	
16	2000-1415	screw		37	3400-2203	drain-pipe joint	
17	2000-2802	pressure meter		38	32008-210095	center spacer	
18	4000-3901	5-way wire connector		39	20000-110077	compressor(H67)	
19	20000-340060	3-way cored wire					
20	95005-310114	Pc4001 controller					
21	2000-3619	relay					

Appendix 3: Circuit diagram of the unit



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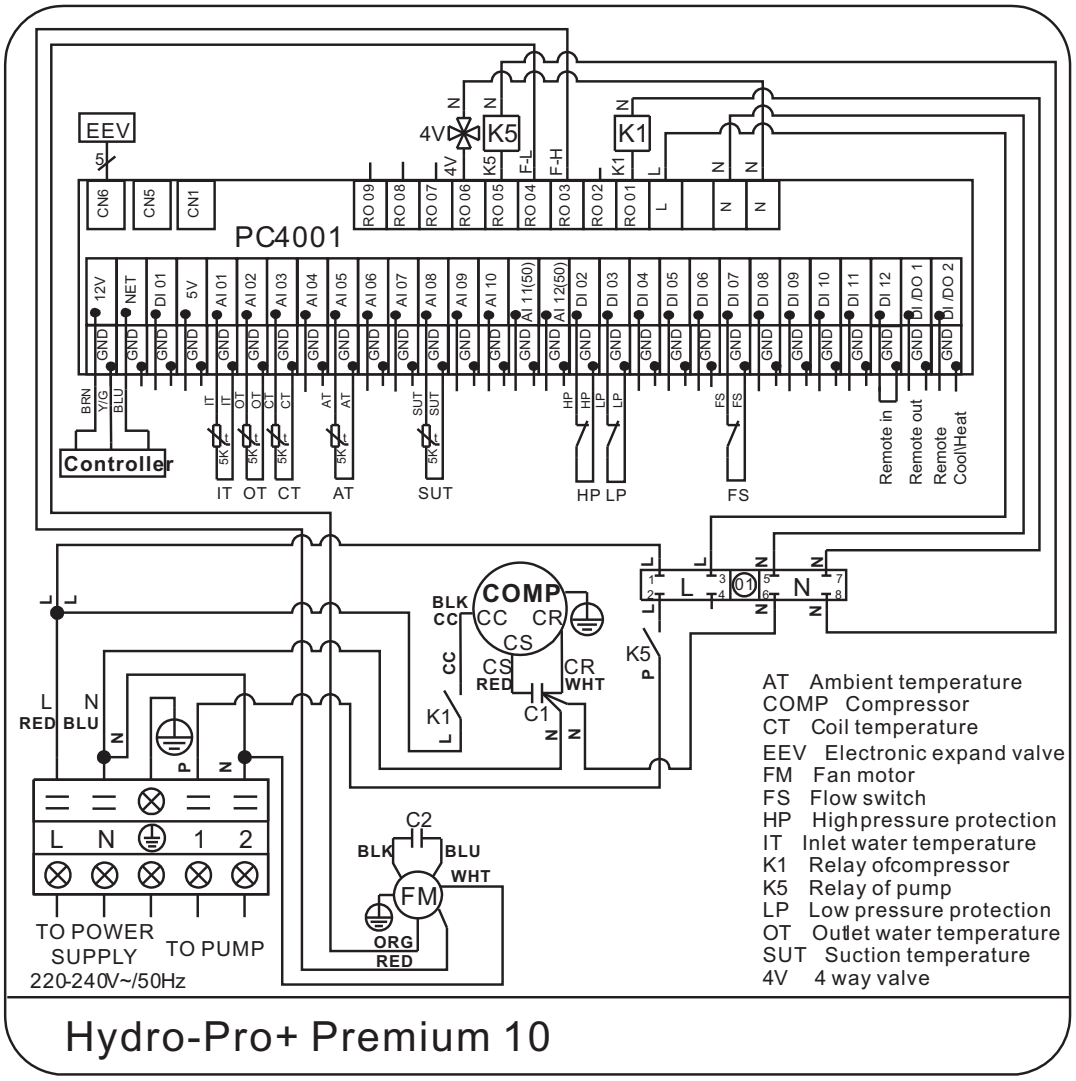
Appendix 3: Circuit diagram of the unit



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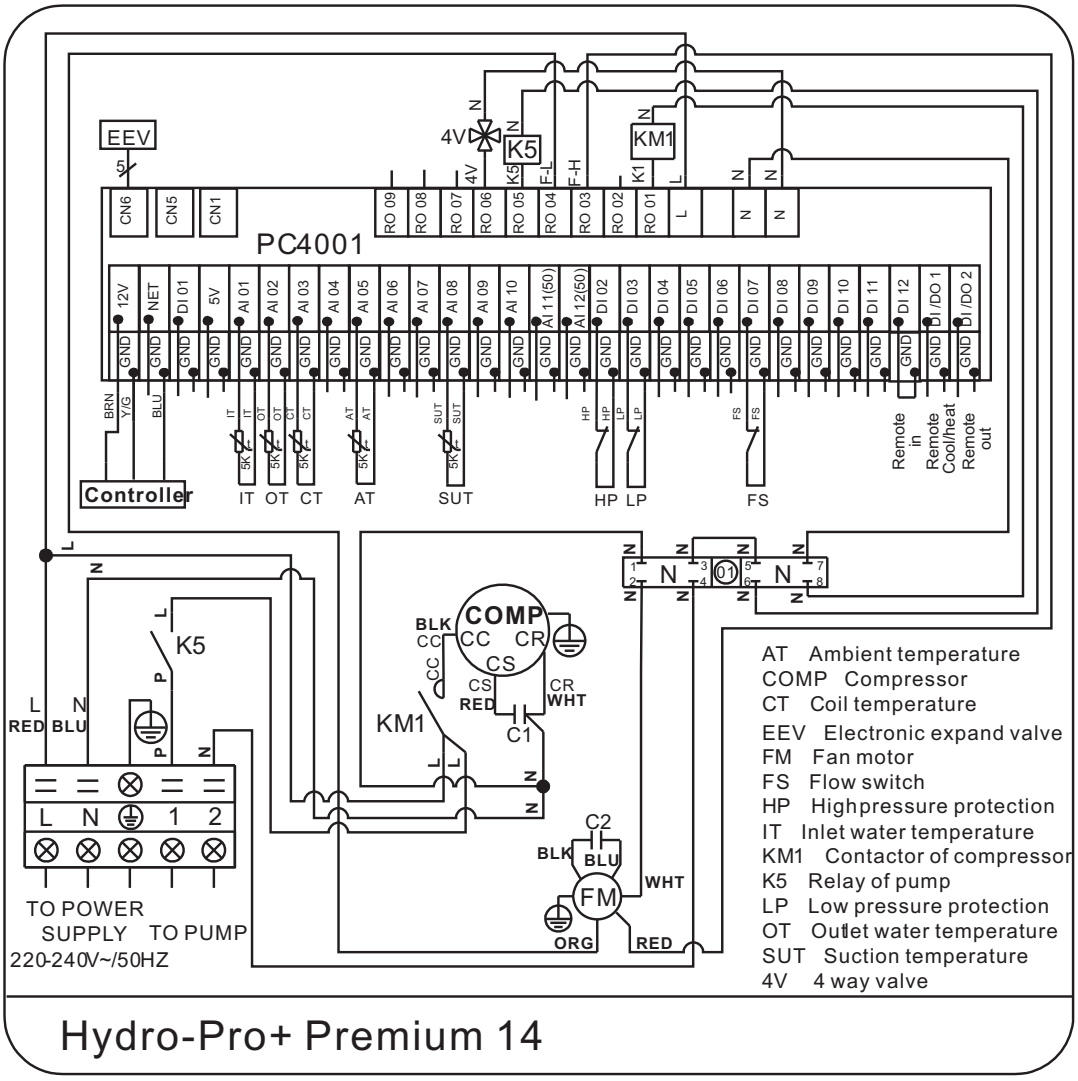
Appendix 3: Circuit diagram of the unit



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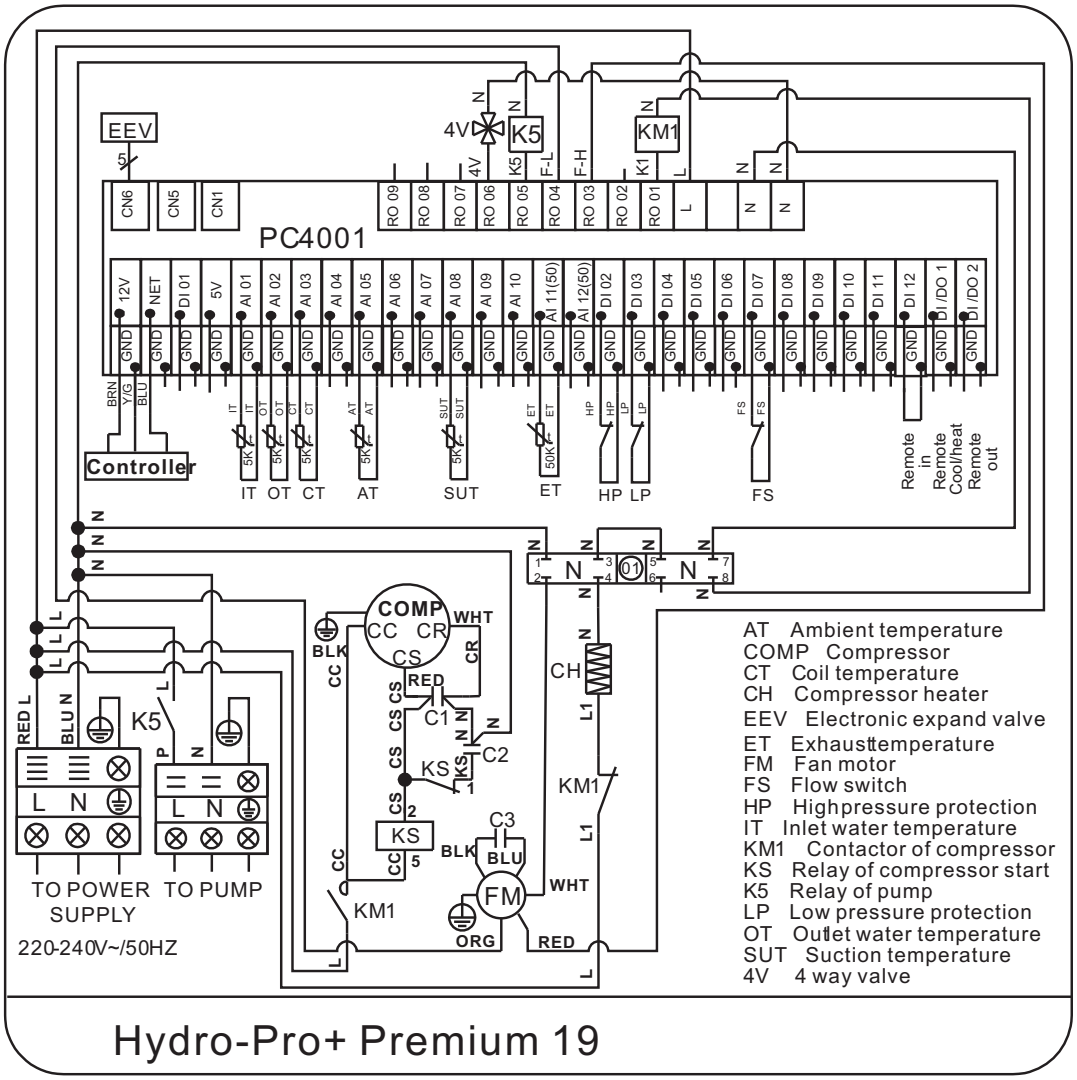
Appendix 3: Circuit diagram of the unit



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